

INSTALLATION/OPERATION



100 Series Camclosure® Integrated Camera System With LowLight™ DSS Technology



C2460M-A (7/03)

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IMPORTANT SAFEGUARDS AND WARNINGS

1. Installation and servicing should be done only by qualified service personnel and conform to all local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and must not be installed where exposed to rain and moisture.
3. Use only installation methods and materials capable of supporting four times the maximum specified load.
4. Use stainless steel hardware to fasten the enclosure to outdoor surfaces.
5. To prevent damage from water leakage when installing an enclosure outdoors, apply sealant around the bolt holes between the enclosure and mounting surface.

CAUTION



Heater elements could be hot! When camera power is on, use caution when adjusting the camera.

REGULATORY NOTICES

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WELCOME

Thank you for purchasing Pelco's Camclosure® integrated camera system with LowLight™, DSS (digital slow shutter) technology. Your new ICS100 Series surface mount dome system includes a high-resolution, low light, color camera with auto iris and varifocal lens.

The LowLight color camera has extended DSS settings to enhance the low light performance of the camera by automatically adjusting the number of fields of integration. This slows the picture frame rate and increases the camera's sensitivity in low light conditions.

Prior to installation and operation of your new system thoroughly familiarize yourself with the information in this manual.

INSTALL THE BACK BOX

REMOVE THE LOWER DOME

Loosen the tamper-resistant screws with the supplied 1/8-inch hollow screwdriver bit. Remove the lower dome and place it to the side.

INSTALL THE BACK BOX

The installation methods for the ICS100 back box include the following:

- Attach Directly to a Wall/Ceiling
- Attach Directly to a Concrete Wall or Ceiling
- Attach to a 4S Electrical Box
- Mount to a Plaster Ring

Select the best method for your installation, and then refer to the following pages for instructions.

Attach Directly to a Wall/Ceiling

Refer to Figure 1 for the following steps.

1. Cut a small hole in the ceiling or wall and pull video and power wires into the base.
2. Attach the back box to the wall/ceiling (hardware not supplied).
3. Connect the video cable.

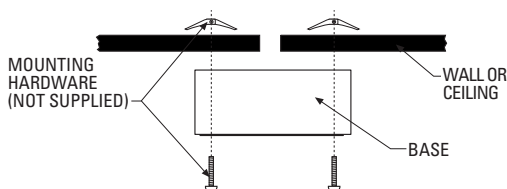
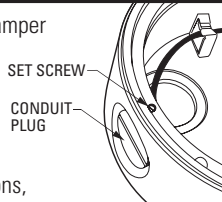


Figure 1. Installation Directly to a Wall/Ceiling

IMPORTANT

To maximize tamper resistance when not using the side conduit opening for wire connections, verify that the conduit plug and set screw are tight.



Attach Directly to Concrete Wall/Ceiling

Refer to Figure 2 for the following steps.

1. Attach the base to the wall or ceiling (hardware not supplied).
2. Do one of the following:

Not Using Side Conduit Opening - Verify the set screw and side conduit cover are tight.

Using Side Conduit Opening - Loosen the set screw and remove the conduit plug. Install a 3/4-inch (1.91 cm) conduit fitting and tighten the set screw.

3. Connect the video cable.

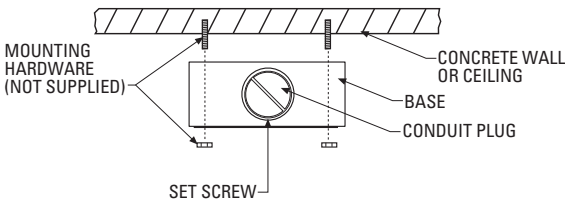


Figure 2. Installation Directly to a Concrete Wall/Ceiling

Attach to a 4S Electrical Box

Refer to Figure 3 for the following steps. The installation instructions assume that the 4S electrical box was previously installed.

1. Attach the ICS100-AP adapter plate (not supplied) to the 4S box with the two 8-32 x .750-inch flat head screws supplied.
2. Pull video and power wires into the base, and attach the base to the adapter plate with the three 8-32 x .375-inch pan head screws supplied.
3. Connect the video cable.

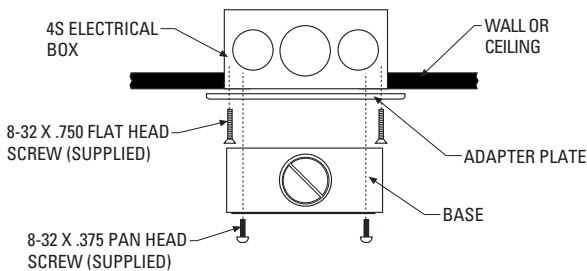


Figure 3. Installation on a 4S Electrical Box

Mount to a Plaster Ring

Refer to Figure 4 for the following steps. Installation instructions assume that the 4S electrical box and plaster ring were previously installed.

1. Pull video and power wires into the base.
2. Attach the base to the plaster ring.
 - Use the two 8-32 x .750-inch pan head screws to attach the base to a 401 plaster ring.
 - Use the three 6-32 x .750-inch pan head screws to attach the base to a 404 plaster ring.
3. Connect the video cable.

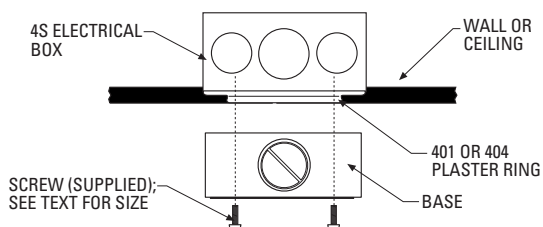


Figure 4. Mounting to a Plaster Ring

CONNECT POWER WIRES

Depending on the input voltage, connect either the 12 VDC or 24 VAC input power wires to the terminal block inside the base. Refer to Figure 5 for the location of the terminal block.

DC Operation – Refer to the enlarged portion of Figure 5 for the 12 VDC (+) and ground (-) connections.

AC Operation – It does not matter which terminals the power wires are connected to. However, if you are wiring more than one Camclosure system to the same transformer, connect one side of the transformer to the same terminal on all units, and connect the other side of the transformer to the remaining terminal. Failure to connect all of the units the same way will cause the cameras to be out of phase with each other and may produce a vertical roll when switching between cameras.

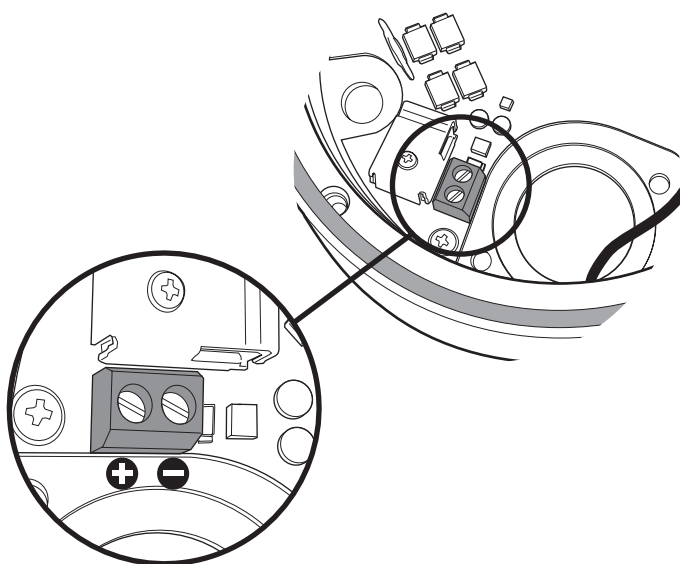


Figure 5. Terminal Block for Input Power

INSTALL THE CAMERA MODULE

CHECK HEATER JUMPER

The Camclosure is equipped with a heater to defrost the dome. Some installations may not require this heater. If the unit will never be subjected to a frost temperature, you can disable the heater, saving power requirements. To disable the heater, remove the jumper cover from the J1 jumper block (refer to Figure 6). It is recommended that the jumper cover be left in the unit by installing it on one of the jumper pins.

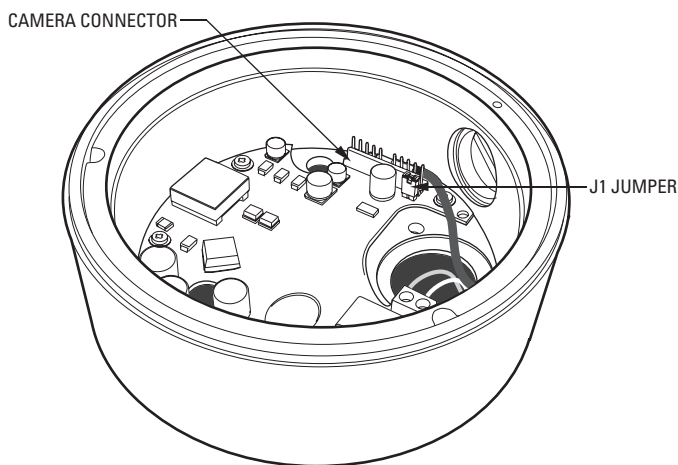
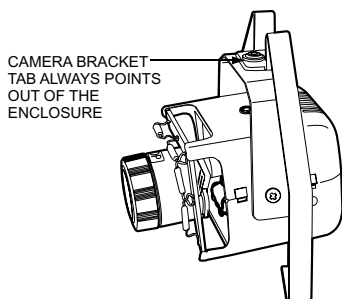


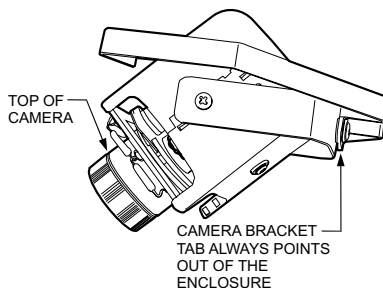
Figure 6. Heater Jumper and Camera Connector Locations

INSTALL AND POSITION THE CAMERA

1. Plug the video connector from the camera into the mating connector inside the back box (refer to Figure 6).
2. Position the camera so that the tab on the camera bracket is pointing out of the enclosure, away from the ceiling or wall. Refer to the following illustrations for proper camera orientation.



Wall Mounting – The camera bracket tab points out of the enclosure and the top of the camera points up towards the tab.



Ceiling Mounting – The camera bracket tab points out of the enclosure and the top of the camera is pointed in the opposite direction.

3. Install the camera bracket. Gently squeeze the bracket, place it against the shoulder inside the back box, and gently release.
4. Turn on power to the camera and monitor.

MAKE CAMERA SETTINGS

CAUTION: Heater elements could be hot! When camera power is on, use caution when adjusting the camera. This applies to all models.

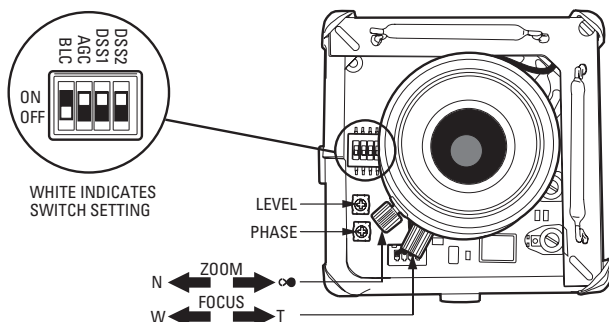


Figure 7. Default Switch Settings and Location of Camera Adjustments

ZOOM/FOCUS

1. Select a field of view by turning the zoom adjustment ring. Refer to Figure 7.
2. Tighten the zoom locking screw.
3. Adjust the focus by moving the focus locking screw clockwise/counterclockwise.
4. Tighten the focus locking screw.

DIGITAL SLOW SHUTTER (DSS)

Digital slow shutter slows the picture frame rate and increases the camera sensitivity under low light conditions. Depending on the number of fields of integration, the picture will develop a granular appearance and motion may show some lag, resulting in a stereoscopic effect or streaking on fast moving objects. These effects increase as the number of fields of integration increase.

Available settings include the following:

ON OFF

- | | |
|-------------------------------|--|
| <input type="checkbox"/> DSS2 | 30 fields of integration maximum (default setting) – 1/2-second scene update rate. |
| <input type="checkbox"/> DSS1 | |
| <input type="checkbox"/> DSS2 | 16 fields of integration maximum – 1/4-second scene update rate. |
| <input type="checkbox"/> DSS1 | |
| <input type="checkbox"/> DSS2 | 4 fields of integration maximum – 1/15-second scene update rate. |
| <input type="checkbox"/> DSS1 | |
| <input type="checkbox"/> DSS2 | OFF – Disables the DSS mode. |
| <input type="checkbox"/> DSS1 | |

Digital slow shutter automatically adjusts the number of fields of integration depending on the light level of the viewed scene, up to the maximum determined by the switch settings.

AGC (AUTOMATIC GAIN CONTROL)

AGC automatically adjusts the image to compensate for changes in light levels.

ON (Default setting) – Enables the AGC mode.

OFF – Disables the AGC mode.

BLC (BACK LIGHT COMPENSATION)

The BLC (backlight compensation) feature compensates for backlit scenes by enhancing objects in the center of the scene.

OFF (Default setting) – Disables the BLC mode.

ON – Enables the BLC mode. Use this setting if a bright backlight is present and the subject in the center of the picture appears dark or as a silhouette.

VERTICAL PHASE ADJUSTMENT (24 VAC OPERATION ONLY)

When using more than one camera power supply, a brief vertical roll may occur on the monitor when a camera view is switched. To eliminate vertical roll reverse the 24 VAC connections on one camera. If both cameras are connected to the same transformer, this should solve the problem. If reversing the connections does not solve the problem, adjust the phase control by synchronizing, or line-locking, the cameras to one another.

How to Adjust the Phase Control

It may be necessary to have two people in communication when synchronizing the cameras: one person at the camera and another person at the monitor to observe the vertical roll and the effect of any adjustments made at the camera.

To synchronize the cameras:

1. Choose a reference camera to which all other cameras will be phased.
2. Select a camera and synchronize it to the reference camera by turning the phase adjustment control (refer to Figure 7) clockwise and/or counterclockwise.
3. Each time an adjustment is made, switch back and forth between the camera you are adjusting and the reference camera. Repeat this process as many times as necessary, until the roll between the cameras is no longer noticeable.
4. Adjust the phase of all other cameras by repeating steps 2 through 3. Always adjust to the reference camera selected in step 1.

NOTE: The preferred method for camera phase adjustment is to use a dual trace oscilloscope to align the vertical synchronization pulses of the reference camera to the selected camera(s).

VARIFOCAL LENS AUTO IRIS LEVEL ADJUSTMENT

To adjust the auto iris level, turn the level adjustment counterclockwise to decrease the brightness level and clockwise to increase the brightness level. Refer to Figure 7 for the location of the level adjustment.

REINSTALL THE LOWER DOME AND TRIM RING

1. **Domes with Liners (only)** – Position the viewing window over the lens of the camera.
 - a. Loosen the three Phillip screws located in the dome.
 - b. Insert the blade of a standard screwdriver in one of the adjustment grooves. Move dome into position.
 - c. Tighten the three Phillip screws to lock liner in place.
2. Align the screw holes in the trim ring with those in the Camclosure base.
3. Tighten the tamper-resistant screws with the supplied 1/8-inch hollow screwdriver bit.

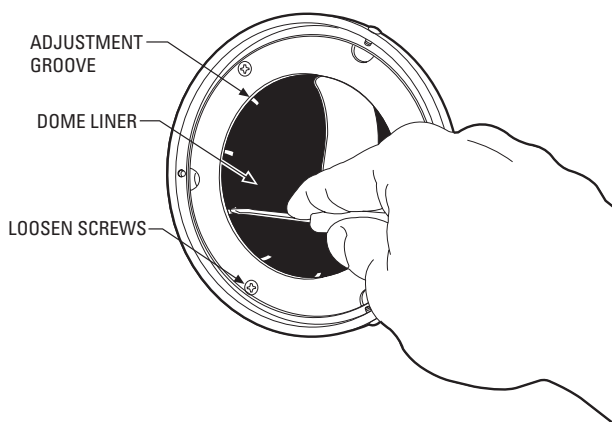


Figure 8. Window Adjustment

SPECIFICATIONS

BACKBOX

Electrical

Input Voltage:	12 VDC or 24 VAC, $\pm 10\%$, auto-sensing
Power Consumption:	13 watts or less
Video Connector:	BNC

General

Operating Temperature:	-50° to 122°F (-46° to 50°C) De-ices to 25°F (-4°C)
Pan/Tilt Adjustment:	Manual; 360° pan; 180° tilt
Construction:	Aluminum with steel camera mounting bracket and polycarbonate dome
Finish:	White polyester powder coat
Dimensions	
Above Ceiling:	1.75 (H) x 3.50 (W) inches (4.45 x 8.89 cm)
Below Ceiling:	2.42 (H) x 5.48 (W) inches (6.15 x 13.90 cm)
Bubble:	3.75-inch diameter
Environment:	Indoor/outdoor
Weight:	1.70 lb (0.77 kg)

CAMERA

Signal System:	NTSC/PAL
Imaging Device:	1/3-inch interline transfer CCD
Resolution:	480 TV lines
Min. Illumination:	0.75 lux @ 40 IRE, DSS off, f1.6 @ wide angle 1.20 lux @ 50 IRE, DSS off, f1.6 @ wide angle 0.025 lux @ 40 IRE, 30 fields of DSS, f1.6 @ wide angle 0.040 lux @ 50 IRE, 30 fields of DSS, f1.6 @ wide angle
Lens:	2.6-6.0 mm or 4.0-9.0 mm varifocal, D-mount, f1.6
Synchronize:	Adjustable AC line lock/internal, auto select
Iris Control:	Electronic/automatic
Signal to Noise:	50 dB
AGG:	Selectable, on/off
BLC:	DIP switch selectable, ON/OFF
Auto Iris Type:	DC drive
Shutter:	1/60-1/100,000 electronic, auto
Video Level:	Adjustable

CERTIFICATIONS

NTSC Models:	UL, cUL, and FCC Class B
PAL Models:	CE Class B, UL, cUL, and FCC Class B

(Design and product specifications subject to change without notice.)

WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment. Exceptions to this warranty are as noted below:

- Five years on Pelco manufactured cameras (CC3500/CC3600/CC3700 and MC3500/MC3600 Series); two years on all other cameras.
- Three years on Genex® Series (multiplexers, server, and keyboard) and 090 Series Camclosure® Camera System.
- Two years on 100/150, 200, and 300 Series Camclosure Camera Systems.
- Two years on all standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM6800E/CM8500/CM9500/CM9740/CM9760 Matrix, DF5 and DF8 Series Fixed Dome products.
- Two years on Spectra®, Esprit®, and PS20 Scanners, including when used in continuous motion applications.
- Two years on Esprit and WW5700 series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico:

Service Department
Pelco
3500 Pelco Way
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico:

Intermediate Consignee
American Overseas Air Freight
320 Beach Road
Burlingame, CA 94010
USA

Ultimate Consignee
Pelco
3500 Pelco Way
Clovis, CA 93612-5699
USA

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REVISION HISTORY

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C2460M	4/03	Preliminary manual for beta testing.
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